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EXAMINER	
RADONIC, NICOLA	
ART UNIT	PAPER NUMBER
4192	
MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/574,737	HARRIS ET AL	
	Examiner	Art Unit	
	NICOLA RADONIC	4192	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 April 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12 and 15-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12 and 15-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *03 April 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *4/3/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. **Claim 5** is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 5 describes a data base (Home Location Register or HLR used in mobile radio systems) not claimed as embodied in computer-readable media and is descriptive material per se and is not statutory because it is not capable of causing functional change in the computer.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

4. Claims 1-12, 15-17 are rejected under 35 U.S.C. 102(a) as being anticipated by GSM 3GPP TR23.040 (V4.8.0, 06-2003) [TR 23.040].

5. **As per claim 1**, TR 23.040 teaches: A telecommunications system for communicating a Short Message Service (SMS) message to a user equipment using a subscriber identity number terminating on an Internet Protocol network using an Internet

Protocol (IP) (**TR 23.040 section 4 describes a network from a Mobile Station to a service center [SC] that connects to short message entity [SME] on a fixed network outside the GSM network, and is capable of interconnecting messages with these external networks**), the system comprising a short message service centre (SM-SC), a gateway mobile switching centre (GMSC) of an SMS network for communicating SMS messages, all Internet Protocol/SMS (IP/SMS) gateway for communicating between the SMS network and the IP network and a home location database (HLR/HSS) for maintaining address data identifying a current location of a user equipment (**TR 23.040 Section 4 describes messaging gateways [SMS-GMSC] with attached HLR database, and the SMS-GMSC connecting to the external SME, and TR 23.040 section 3.8 describes SMS and Internet electronic mail interworking**), the gateway mobile switching centre being operable in response to the SMS message received from the short message service centre to interrogate the home location database for an address to which the SMS message should be sent, the home location database being operable to provide the gateway mobile switching centre with an address of the IP/SMS gateway stored in association with the subscriber identity number, the gateway switching centre being operable to send the SMS message to the IP/SMS gateway (**TR 23.040 Section 2.1.1 SMS-GMSC is defined as interrogating home location database [HLR] for routing and SMS info. The subscriber identity number used with the databases is the International Mobile Subscriber Identity [IMSI]**), the IP/SMS gateway being operable to retrieve an Internet Protocol address corresponding to the subscriber identity number stored in an IP/SMS database

associated with the IP/SMS gateway, and to communicate the SMS message to the user equipment at the retrieved IP address via the IP network (**TR 23.040 section 2.1.1 describes that the gateway SMS-GMSC holds SMS routing information**), wherein the IP network includes an authentication server which is operable to determine the IP/SMS gateway address from the IP network via which the user equipment is communicating, and to communicate the IP/SMS gateway address to the home location database (**the authentication server is equivalent to an 802.11b wireless router with encrypted authentication and the IP network describes internet operation in general**), the IP/SMS gateway address being stored in the home location database in association with the subscriber identity number for retrieval by the gateway mobile switching centre in response to the received SMS message (**TR 23.040 section 2.1.1 describes that the gateway holds SMS routing information which would include IP and SMS address information and IMSI number**).

6. **As per claim 2**, TR 23.040 teaches: A system as claimed in Claim 1 (**see treatment of claim 1**), wherein the authentication server is operable to determine the IP address of the user equipment when communicating via the IP network (**descriptive of 802.11b wireless router operation on internet**), and to communicate the IP address of the user equipment to the IP/SMS gateway for storing in the IP/SMS database associated with the IP/SMS gateway for retrieval by the IP/SMS gateway in response to the received SMS message (**IP addresses are included in internet IP packets, and the storage of these addresses is equivalent to routing tables in Ethernet gateway devices**).

7. **As per claim 3**, TR 23.040 teaches: A system as claimed in Claim 1 or 2 (**see treatment of claim 1**), wherein the home location database is arranged to set for at least the subscriber identity number of the user equipment, a flag indicative of whether the user equipment is currently communicating via the IP network, the address of the IP/SMS gateway to which SMS messages should be sent being stored in association with the flag (**TR 29.040 section 3.2.6 describes 'The Mobile Station Not Reachable Flag (MNRF) within the HLR' that explicitly describes whether the mobile is available to communicate via SMS, and from TR 23.040 section 2.1.1 the HLR database stores other address information**).

8. **As per claim 4**, TR 23.040 teaches: A system as claimed in Claim 3 (**see treatment of claim 3**), wherein the authentication server is operable to set the flag in the home location database to indicate that the user equipment is currently communicating via the IP terminated network, and if not set to indicate that the SMS message should be communicated via a serving support node of a cellular mobile radio network for delivery to the user equipment (**TR 23.040 section 3.8.2.3 defines the Optional Control Flag at the which can be redefined or extended by the either the SC or SME to control email redirection**).

9. **As per claim 5**, TR 23.040 teaches: A home location database for maintaining address data identifying a current location of a user equipment (**TR 23.040 Section 2.1.1 describes the home location data base HLR implemented as a function in the gateway MSC [SMS-GMSC] hardware**), the address data providing an address to which an SMS message addressed to the user equipment at a subscriber identity number should be sent (**TR 23.040 section 2.1.1 the gateway holds SMS routing information**), wherein the home location database is arranged to provide a gateway mobile switching centre with an address of an IP/SMS gateway for communicating the SMS message to the user equipment at the subscriber identity number, when the user equipment is communicating via an Internet Protocol (IP) network using an Internet Protocol (**TR 23.040 Section 4 describes messaging gateways [SMS-GMSC] with attached HLR database**), communication being terminated on the IP network, the address of the IP/SMS gateway being provided by an authentication server (**802.11b**

router with encryption on internet), which determines the IP/SMS gateway from the IP network via which the user equipment (**a description of IP internet operation**) is communicating the home location database being arranged to store for at least the subscriber identity number of the user equipment (**TR 23.040 section 2.1.1 describes that the gateway holds SMS routing information which would include IP and SMS address information and IMSI number**), a flag indicative of whether the user equipment is currently communicating via the IP network (**TR 29.040 section 3.2.6 describes 'The Mobile Station Not Reachable Flag (MNRF) within the HLR' that explicitly describes whether the mobile is available to communicate via SMS, and from TR 23.040 section 2.1.1 the HLR database stores other address information**), and-if the flag is set to indicate that the user equipment is currently communicating via the IP network, an address of the IP/SMS gateway to which SMS messages should be sent (**TR 23.040 section 3.8.2.3 defines the Optional Control Flag which can be redefined or extended by the SC or SME to control email redirection**).

10. **As per claim 6**, TR 23.040 teaches: A method of communicating a Short Message Service (SMS) message to a user equipment using a subscriber identity number terminating on an Internet Protocol (IP) network using an Internet Protocol (IP) (**TR 23.040 uses the SC and SME gateways to connect to non-GSM networks, and the HLR database is a function on the SMS-GMSC to hold addressing data based on International Mobile Subscriber Identity [IMSI] and Subscriber Identity Number and the Optional Control Flag to control address routing**), the method comprising

maintaining address data identifying a current location of the user equipment in a home location database, receiving the SMS message at a gateway mobile switching centre (GMSC) of an SMS network for communicating the SMS message, providing, to the gateway mobile switching centre, from the home location database an address of an Internet Protocol/SMS gateway for communicating between the SMS network and the IP network (**TR 23.040 Section 4 describes messaging gateways [SMS-GMSC] with attached HLR database connecting to the SC and SME**), sending the SMS message to the IP/SMS gateway, retrieving the IP address corresponding to the subscriber identity number from an IP/SMS database associated with the IP/SMS gateway (**TR 23.040 section 2.1.1 describes that the gateway holds SMS routing information which would include IP/SMS address information, and TR 23.040 section 3.8 describes SMS and Internet Email interworking**), and communicating the SMS message to the user equipment at the retrieved IP address via the IP network (**descriptive of internet operation**), wherein the maintaining the address data comprises determining the IP/SMS gateway address from the IP network via which the user equipment is communicating using an authentication server connected to the IP network (**802.11b router with encryption operating attached to the internet**), communicating the IP/SMS gateway address from the authentication server to the home location database (**a description of IP internet operation**), and storing the IP/SMS gateway address in the home location database in association with the subscriber identity number for retrieval in response to the received SMS message (**TR 23.040**

section 2.1.1 describes that the gateway holds SMS routing information which would include IP/SMS address information).

11. **As per claim 7**, TR 23.040 teaches: A method as claimed in Claim 6 (**see treatment of claim 6**), the method comprising determining the IP address of the user equipment when communicating via the IP network (**802.11b router with encryption operating attached to the internet**), communicating the IP address of the user equipment to the IP/SMS gateway (**a description of IP internet operation**), and storing the IP address of the user equipment in an IP/SMS database associated with the IP/SMS gateway (**TR 23.040 section 2.1.1 describes that the gateway holds SMS routing information which would include IP/SMS address information**), the IP address being stored in association with the subscriber identity number for retrieval in response to the received SMS message (**TR 23.040 Section 4 describes messaging gateways [SMS-GMSC] with attached HLR database**).

12. **As per claim 8,** TR 23.040 teaches: A method as claimed in Claim 6 or 7 (**see treatment of claim 6**), comprising setting a flag in the home location database for at least the subscriber identity number of the user equipment, the flag being indicative of whether the user equipment is currently communicating via the IP network, the address of the IP/SMS gateway to which SMS messages should be sent being stored in association with the flag (**TR 23.040 section 3.8.2.3 defines the Optional Control**

Flag which can be redefined or extended by the SC or SME to control email redirection).

13. **As per claim 9**, TR 23.040 teaches: A method as claimed in Claim 8 (**see treatment of claim 8**), comprising setting the flag in the home location database to indicate that the user equipment is currently communicating via the IP terminated network, and not setting the flag to indicate that the SMS message should be communicated via a serving support node of a cellular mobile radio network for delivery to the user equipment (**this limitation is read as using the flag in a binary fashion, wherein SET selects IP communication, and CLEARED selects mobile communication but this describes the opposite logical state of the flag described in claim 8**).

14. **As per claim 10**, TR 23.040 teaches: A telecommunications system for communicating a Short Message Service (SMS) message to a user equipment using a subscriber identity number terminating on an Internet Protocol (IP) network using an Internet Protocol (IP) (**TR 23.040 section 4 describes a network from a Mobile Station to a service center [SC] that connects to short message entity [SME] on a fixed network outside the GSM network, and is capable of interconnecting messages with these external networks, and TR 23.040 section 2.1.1 describes that the gateway SMS-GMSC holds SMS routing information**), the system comprising means for maintaining address data identifying a current location of the user

equipment in a home location database (**the SMS-GMSC maintains the HLR with interconnection information and serves this to the rest of the devices on the network as requested)**, means for receiving the SMS message at a gateway mobile switching centre (GMSC) of an SMS network for communicating the SMS message (**text is descriptive of GSM network**), means for providing, to the gateway mobile switching centre, from the home location database an address of an Internet Protocol/SMS gateway for communicating between the SMS network and the IP network (**TR 23.040 section 2.1.1 describes that the gateway holds SMS routing information which would include IP/SMS address information**), means for sending the SMS message to the IP/SMS gateway (**TR 23.040 section 4 describes the SME connected to the SMS-GMSC**), means for retrieving the IP address corresponding to the subscriber identity number from an IP/SMS database associated with the IP/SMS gateway (**TR 23.040 SMS-GMSC with HLR database attached**), and means for communicating the SMS message to the user equipment at the retrieved IP address via the IP network (**descriptive of internet operation**), wherein the means for maintaining the address data comprises means for determining from an authentication server forming part of the IP network the IP/SMS gateway address from the IP network via which the user equipment is communicating (**the authentication server is equivalent to an 802.11b wireless router with encrypted authentication and the operation over the IP network describes internet operation in general**), means for communicating the IP/SMS gateway address from the authentication server to the home location database (**descriptive of internet operation**), and means for storing the

IP/SMS gateway address in the home location database in association with the subscriber identity number for retrieval in response to the received SMS message (**TR 23.040 section 2.1.1 describes that the gateway holds SMS routing information which would include IP/SMS address information**).

15. **As per claim 11**, TR 23.040 teaches: A telecommunications system as claimed in Claim 10 (**see treatment of claim 10**), comprising means for determining an Internet Protocol (IP) address of the user equipment when communicating via the IP network, means for communicating the IP address of the user equipment to an IP/SMS gateway (**descriptive of internet operation**), and means for storing the IP address of the user equipment in the IP/SMS database associated with the IP/SMS gateway, the IP address being stored in association with the subscriber identity number, for retrieval in response to the SMS message (**TR 23.040 Section 4 describes messaging gateways [SMS-GMSC] with attached HLR database, and the SMS-GMSC connecting to the external SME, and TR 23.040 section 3.8 describes SMS and Internet Email interworking**).

16. **As per claim 12**, TR 23.040 teaches: A telecommunications system as claimed in Claim 10 (**see treatment of claim 10**), comprising means for setting a flag in the home location database for at least the subscriber identity number of the user equipment, a flag indicative of whether the user equipment is currently communicating via the IP network, the address of the IP/SMS gateway to which SMS messages should

be sent being stored in association with the flag (**TR 23.040 uses the SC and SME gateways to connect to non-GSM networks, and the HLR database is a function on the SMS-GMSC to hold addressing data based on International Mobile Subscriber Identity [IMSI] and the Optional Control Flag to control address routing**).

17. **As per claim 15**, TR 23.040 teaches: A system as claimed in Claim 2 (**see treatment of claim 2**), wherein the home location database is arranged to set for at least the subscriber identity number of the user equipment, a flag indicative of whether the user equipment is currently communicating via the IP network, the address of the IP/SMS gateway to which SMS messages should be sent being stored in association with the flag (**TR 23.040 section 3.8.2.3 defines the Optional Control Flag at the which can be redefined or extended by the either the SC or SME to control email redirection**).

18. **As per claim 16**, TR 23.040 teaches: A method as claimed in Claim 7 (**see treatment of claim 7**), comprising setting a flag in the home location database for at least the subscriber identity number of the user equipment, the flag being indicative of whether the user equipment is currently communicating via the IP network, the address of the IP/SMS gateway to which SMS messages should be sent being stored in association with the flag (**TR 23.040 section 3.8.2.3 defines the Optional Control**

Flag at the which can be redefined or extended by the either the SC or SME to control email redirection at the SMS-GMSC).

19. **As per claim 17**, TR 23.040 teaches: A telecommunications system as claimed in Claim 11 (**see treatment of claim 11**), comprising means for setting a flag in the home location database for at least the subscriber identity number of the user equipment, a flag indicative of whether the user equipment is currently communicating via the IP network, the address of the IP/SMS gateway to which SMS messages should be sent being stored in association with the flag (**TR 23.040 Section 4 describes messaging gateways [SMS-GMSC] with attached HLR database, holding SMS routing information which would include IP/SMS address information, TR 29.040 section 3.2.6 describes 'The Mobile Station Not Reachable Flag (MNRF) within the HLR' that explicitly describes whether the mobile is available to communicate via SMS, and from TR 23.040 section 2.1.1 the HLR database stores other address information, and TR 23.040 section 3.8.2.3 defines the Optional Control Flag at the which can be redefined or extended by the either the SC or SME to control email redirection**).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NICOLA RADONIC whose telephone number is (571)270-5246. The examiner can normally be reached on IFW work schedule, with some Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Pankaj Kumar can be reached on (571) 272-3011. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NR
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